



# Student Transportation

February 11, 2013



# Overview

# Why the need for change?

## Reorganization

- Necessary because of secondary reorganization, which includes the opening of Battle High and the district's three junior highs changing to middle schools

## Growth

- Creates a system ready to support the addition of two new elementary schools scheduled to open in 2015 and 2016

## Middle School and High School Routes

- Allows middle school students and high school students to be transported separately, eliminating the current requirement to transfer students between buildings in order to catch their buses

## Efficiency

- Allows more efficient use of the district's bus fleet and ultimately minimizes transportation costs

## Driver Retention

- Improves recruitment and retention of bus drivers due to more available hours and driving opportunities



# Background

As part of First Student's contract, First Planning Solutions was engaged to model transportation for the 2013-14 school year, including new high school and middle school configuration

<b>Bell Schedule 1</b>  Three-tier (First Student recommended)	<b>Bell Schedule 2</b>  Three-tier	<b>Bell Schedule 3</b>  Alternate three- tier from Board workshop  15 minutes between high schools and middle schools	<b>Bell Schedule 4</b>  Variation on Bell Schedule 3  High schools and middle schools flipped	<b>Bell Schedule 5</b>  Second alternate three-tier from Board workshop  15 minutes between high schools and elementary schools	<b>Bell Schedule 6</b>  Four-tier
<ul style="list-style-type: none"><li>• Middle schools and some elementary schools on Tier 1</li><li>• Remaining elementary schools on Tier 2</li><li>• High schools on Tier 3</li></ul>	<ul style="list-style-type: none"><li>• Elementary schools on Tier 1</li><li>• Middle schools on Tier 2</li><li>• High schools on Tier 3</li></ul>	<ul style="list-style-type: none"><li>• Elementary schools on Tier 1</li><li>• High schools on Tier 2</li><li>• Middle schools on Tier 3</li></ul>	<ul style="list-style-type: none"><li>• Elementary schools on Tier 1</li><li>• Middle schools on Tier 2</li><li>• High schools on Tier 3</li></ul>	<ul style="list-style-type: none"><li>• Middle schools on Tier 1</li><li>• High schools on Tier 2</li><li>• Elementary schools on Tier 3</li></ul>	<ul style="list-style-type: none"><li>• Some elementary schools on Tier 1</li><li>• High schools on Tier 2</li><li>• Remaining elementary schools on Tier 3</li><li>• Middle schools on Tier 4</li></ul>

# Methodology

- Data contained in the VersatransRP system operated by First Student, Columbia, was used as the basis for the models; any inaccuracies in the data may affect final results
- Only regular-education bus routes were considered in the models; baseline current bus count is 125 regular-education buses in operation
- Parameters:
  - Middle school will not start before 7:30 AM
  - Elementary schools will not start before 7:40 AM
  - Middle school/high school day length is between 7 hours 5 minutes and 7 hours 10 minutes
  - Elementary school day length is between 6 hours 50 minutes and 7 hours
  - Allow 3 minutes for unloading in the AM; arrive 2 minutes before bell in the PM and depart 10 minutes after bell for high schools/middle schools and 7 minutes after bell for elementary schools
  - Time between bells does not equal available bus run time; time is reduced by unloading time in the AM (~3 minutes) and by pre-bell arrival and load/depart delay in the PM (~9-12 minutes)

# **Recommendation**



\*Lee, Midway Heights, New Haven, Ridgeway and Benton, Rock Bridge, and Two Mile Prairie elementary schools are in Tier 1 (because they have the longest elementary school runs)

# Bell Schedule 1

Three-tier  
(First Student recommended)

Grade	AM Bell	AM Arrive	# Buses AM	Available Run Time	Total Buses
Middle/ Elementary*	7:30/7:40	7:15/7:25	109	District maximum	112 (estimated)
Elementary	8:20	8:05	68	47/37 minutes	
High	9:00	8:45	93	37 minutes	

Grade	PM Bell	PM Arrive	# Buses PM	Available Run Time	Total Buses
Middle/ Elementary*	2:35/2:40	2:45/2:47	106	33/31 minutes	122 (estimated)
Elementary	3:20	3:27	65	36 minutes	
High	4:05	4:15	93	District maximum	

# Advantages

## 1. Research supports:

- High school students (grades 9-12) having an opportunity for later start time
- The changing nature of curriculum delivery at schools (online courses, blended courses, flexible-time courses) allows greater flexibility for students and families
- Current high school model uses (career exploration, part-time students/dual enrollment, AUT, multiple online options)
- High schools have many before-school activities; new model can expand these and expand facility usage for athletics in an efficient manner

2. High schools are large and rarely have full faculty meetings; most use plan period to meet with all staff throughout the day
3. About 50% of high school students grades 10-12 get to school with private transportation
4. Opportunity for city public transportation to provide early and late options for high school students



# Advantages (continued)

5. Flexible-time courses and online courses create a staggered entry and exit for students to each building
6. Middle school staff working with high school extracurricular programs will have time to travel and prepare for duties
7. Middle school model increases opportunities for after-school athletics, music, and clubs; students could participate in programs from 3:00 p.m. to 4:30/5:00 p.m.
8. Middle school athletic programs will compete locally and would not require significant travel
9. Middle school early start will allow for older siblings to be home after school with younger children
10. Rerouting for a three-tier bell schedule will create the opportunity for bus routes to be scheduled to arrive and depart elementary schools in a more timely fashion

# Advantages (continued)

11. Elementary schools currently have Adventure Club beginning at 7:00 a.m. and ending at 6:00 p.m.
12. After-school activity buses would be available for all middle schools at 5:00 p.m. without problem
13. Allows for student growth and new schools to be added to the transportation schedule in effective ways

# Challenges

1. High school student schedules would become more complicated, as more options will be provided
2. Student space needed at schools for online courses and free time; supervision would also need to be provided
3. Teachers' schedules would vary based on student scheduling; teachers could have different start and end times each semester
4. There may be a need for consulting and contracted services to manage scheduling
5. Columbia Area Career Center will need to coordinate offerings with sending schools
6. MSHSAA issues will need to be resolved; this is a new paradigm for school operation and is not consistent with some existing compliance issues
7. Some expense may be necessary to design and implement more online or blended course offerings



# Other Schedules

# Bell Schedule 2

Three-tier

Grade	AM Bell	AM Arrive	# Buses AM	Available Run Time	Total Buses
Elementary	7:40	7:25	113	District maximum	128 (estimated)
Middle	8:25	8:10	64	42 minutes	
High	9:10	8:55	93	42 minutes	

Grade	PM Bell	PM Arrive	# Buses PM	Available Run Time	Total Buses
Elementary	2:30	2:37	107	51 minutes	129 (estimated)
Middle	3:30	3:40	64	33 minutes	
High	4:15	4:25	4:13	District maximum	

\*Gentry and Rock Bridge High ride together within Gentry boundary (22 buses); West and Hickman ride together within West boundary (11 buses); buses arrive and depart high schools first

# Bell Schedule 3

Alternate three-tier from Board workshop  
15 minutes between high schools and middle schools

Grade	AM Bell	AM Arrive	# Buses AM	Available Run Time	Total Buses
Elementary	7:40	7:25	113	District maximum	141 (estimated)
High	8:40	8:25	64	57 minutes	
Middle/high*	8:55	8:45	77	77 minutes (from elementary schools)	

Grade	PM Bell	PM Arrive	# Buses PM	Available Run Time	Total Buses
Elementary	2:30	2:37	107	66 minutes (to high schools)	141 (estimated)
High	3:45	3:55	64	81 minutes (to middle/high schools)	
Middle/high*	4:00	4:10	77	District maximum	



\*Gentry and Rock Bridge High ride together within Gentry boundary (22 buses); West and Hickman ride together within West boundary (11 buses); buses arrive and depart middle schools first

# Bell Schedule 4

Variation on Bell Schedule 3  
High schools and middle schools flipped

Grade	AM Bell	AM Arrive	# Buses AM	Available Run Time	Total Buses
Elementary	7:40	7:25	113	District maximum	141 (estimated)
Middle	8:35	8:20	44	52 minutes	
High/middle*	8:50	8:35	8:38	67 minutes (from elementary schools)	

Grade	PM Bell	PM Arrive	# Buses PM	Available Run Time	Total Buses
Elementary	2:30	2:37	107	61 minutes (to middle schools)	141 (estimated)
Middle	3:40	3:50	44	76 minutes (to high/middle schools)	
High/middle*	3:55	4:05	97	District maximum	

# Bell Schedule 5

Second alternate  
three-tier from  
Board workshop  
  
15 minutes  
between high  
schools and  
elementary  
schools

Grade	AM Bell	AM Arrive	# Buses AM	Available Run Time	Total Buses
Middle	7:30	7:15	64	District maximum	206 (estimated)
High	8:30	8:15	93	57 minutes	
Elementary	8:45	8:30	113	72 minutes (from middle schools)	

Grade	PM Bell	PM Arrive	# Buses PM	Available Run Time	Total Buses
Middle	2:35	2:45	64	47 minutes (to high schools)	201 (estimated)
High	3:35	3:45	93	58 minutes (to elementary schools)	
Elementary	3:45	3:52	107	District maximum	

# Bell Schedule 6

Four-tier

Grade	AM Bell	AM Arrive	# Buses AM	Available Run Time	Total Buses
Elementary 1	7:40	7:25	59	District maximum	169 (estimated)
High	8:00	7:45	93	17 (to elementary 2 schools) or DM	
Elementary 2	8:25	8:10	54	28 minutes (to high schools) or 42 minutes (to elementary 1 schools)	
Middle	8:45	8:30	64	17 minutes (to elementary 2 schools) or 42 minutes to high schools)	

Grade	PM Bell	PM Arrive	# Buses PM	Available Run Time	Total Buses
Elementary 1	2:40	2:47	57	16 minutes (to high schools) or 36 minutes (to elementary 2 schools)	169 (estimated)
High	3:05	3:15	93	8 minutes (to elementary 2 schools) or 33 minutes (to middle schools)	
Elementary 2	3:25	3:32	50	16 (to middle schools) or DM	
Middle	3:50	4:00	64	District Maximum	



# **In Conclusion**

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The conversation will continue with all interested parties over the next month, and a final recommendation will be made at the March 11 Board of Education meeting



All voices  
will be  
heard